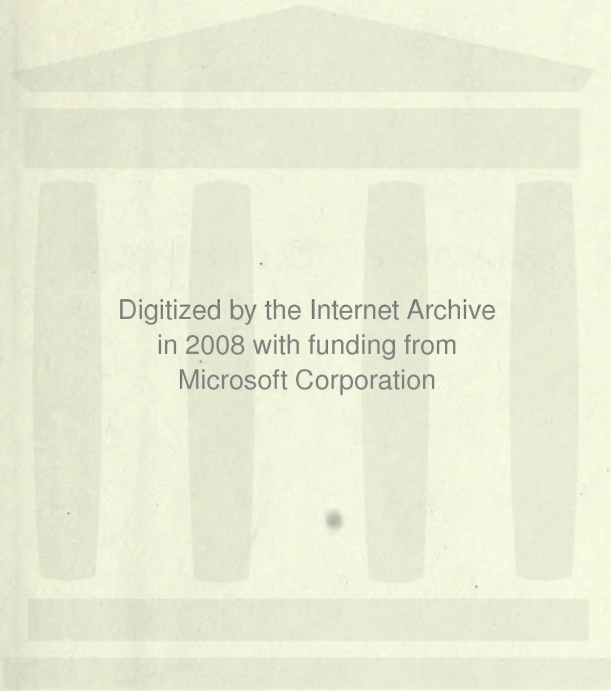

SLEEP AND THE SLEEPLESS

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SIMPLE RULES FOR OVERCOMING INSOMNIA

BY

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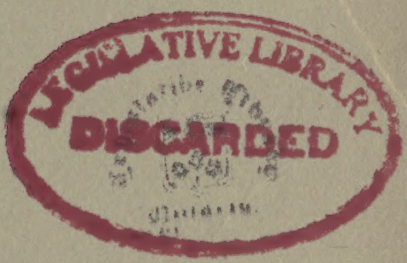

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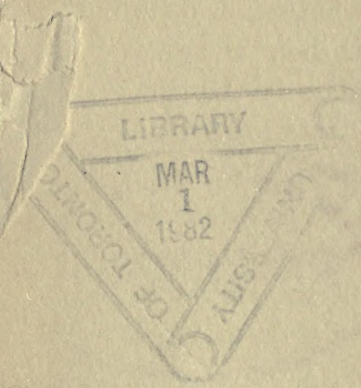

PREFACE

The aim of this book is to help sleepless people to cure themselves, to tell them practically and specifically what should be done in the way of food, exercise, baths, dress, and mental attitude that they may capture sleep. The book is essentially practical and free from puzzling scientific terms. It sets forth what can be done by each for himself without the help of nurse or doctor. Although addressed to the layman in his own tongue and free from technical terms, it is based upon the latest results of scientific study and represents the essence of a wide experience. It constitutes a reliable handbook for insomniacs who, if they follow it as a guide, should find relief and ultimate cure.

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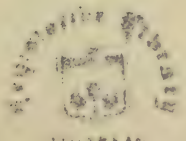
CHAPTER I

SOME CHARACTERISTICS OF SLEEP

Of all the remarkable and wonderfully adjusted elements and agencies that go to the making up of the human machine, and that contribute to its maintenance in proper working order, none is so essential as sleep.

Thanks to its magic restorative virtue, the life force that we expend during the day is renewed in us during the night. The wear and tear of sixteen hours of work and play is repaired in eight hours of recuperative slumber.

During the day, life flows out from us at every muscular or mental effort. During the night, it flows in with every sleeping inhalation. And we do not live by days or years, but *by the*



margin between what we expend of our vitality during the day and what we gain during the night.

So long as man was satisfied to spend during the day only as much energy as he could make up at night during sleep, the race was vigorous and long-lived; old age began at eighty. In these strenuous days, however, work and play are both under such heavy pressure that twice as much life flows out of us during the day as flows into us during the night, and old age begins at forty.

The Approach of Insomnia.—The man who crowds sixteen hours of labour into eight, or eight hours of dissipation into four, may delude himself for a while into the belief that as he is working and playing harder, so he is sleeping harder. Unfortunately this is a fallacy.

He will not realise at first that he is no longer living on his income of energy but that he is eating up his capital and making daily inroads into his reserve supply of vital force.

Because he is sleeping the same number of *hours,* he will fancy that each hour has the same recuperative value that it had before he began

"oiling the wheels of time" and inflating his sixteen hours of wakefulness into thirty-two.

He will soon find, however, not only that his nights do not offset his days but that they contain less and less restorative balm. Each morning he will rise less refreshed, each night he will feel more exhausted. And then, as his daytime efficiency diminishes his nocturnal restlessness will increase.

He will no longer be able to "steep his senses in forgetfulness" and "the cares that infest the day" will tug at his pillow through half the night. From eight hours sleeping he will come down to four and then to shreds of fitful and dream-haunted slumber which, pieced out minute to minute, will represent less than two hours of unconsciousness.

Soon he will fancy that even this brief and inadequate surcease has been curtailed. He will grow convinced that sleep cannot come to him and under the fret of this one idea he will gradually come to a complete forgetfulness of how to sleep. Pity the man or woman who has reached this stage. Few if any of the ills of

life obscure so completely the sunshine of happiness as does insomnia.

The unfortunate victim will begin the day under the shadow of doubt. Before it is yet noon, he will be obsessed with the idea that the coming night will not bring him sleep. Behind every thought, will lurk the fear that the hours of darkness must be spent in restless tossing. He will become haggard of face, wandering in attention, impatient in manner, hesitating in speech and bungling in mind.

Life will flow out of him not only during the hours of daylight, but during every minute of his wakefulness and he will suddenly find himself confronted with the realisation that his reserve supply of energy and vital strength is exhausted.

If, in the face of this calamity, the victim pause long enough to analyse his condition, he will find that it is due in large measure to the *crumbling of his will power,* overwhelmed as it has been day after day by tasks beyond human endurance. If the modern galley slaves of business who take pride in being likened to "live wires" could achieve the impossible and *ex-*

tinguish the life in the wires upon retiring for the night, all might be well. A fresh current would flow into them as they slept and the dynamo would find itself recharged in the morning. Unfortunately the wire keeps sputtering all night and ultimately burns itself out.

The sufferer from insomnia may take himself in hand before he is totally bankrupt of will power. He may decide to expend less energy during his waking hours, hoping thereby to lessen the daily overdraft upon his reserve strength. If he still has a sufficient balance of vitality to his credit this may be the turning point and in time he may find himself sleeping normally. Too often, however, even when the high pressure of business and fast living has been removed, sleep remains away. At this stage the victim has *forgotten how to sleep.*

Fortunately, sleep is a habit so deeply ingrained that it can be picked up again easily if we apply ourselves to the task with system and perseverance. To show how this may be done is one of the objects of this book.

In order that sufferers from sleeplessness

may be able to rid themselves of their harassing infirmity, it is necessary that they should know something of the natural history of sleep and of the causes of insomnia. These may be stated briefly and simply, but first it is necessary to state definitely that *the cultivation of an effective will is perhaps the most important step towards relief.* The capacity to exert the will and even the capacity for concentration upon which such exertion depends are often greatly diminished. These must be built up.

The Will to Sleep.—It is to those who feel the shadow of this apparently needless affliction settling down upon them and who have not yet despaired that this message is addressed. For those who can still think clearly and not only search with some measure of keenness for causes but also take up patiently and perseveringly the cultivation of the right attitude toward life, it can be said that there is such a thing as a *will to sleep.* When this is but an instinct, which has not grown into a conscious will as the other instincts have, but which has come to an early death through neglect, then such a will must be built up. If there was such a will in

early days of development and it has been lost, then it must be revived and cultivated.

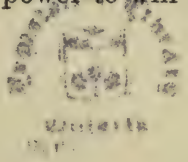
It must be borne in mind that no one comes off victorious in any battle who does not enter the lists with the determination to succeed. This is said not only as an incentive but as a warning, for just now, some of the newest foes of the insomniac are found in the home of his friends. As the victim tries in desperation of mind to reason out why he, a strong man with a will effective in many undertakings, cannot lay compelling hands on sleep, too often he will find his initial vexation increased by the lack of logic of those who advocate this or that remedy. Particularly is this true when hypnotism is pointed out to him as a means to obtain sleep.

When asked, as a preliminary to acquiring the disposition to sleep, to abandon his full consciousness and put his mind at the disposal of another, he may well hesitate if he realises that he is already the victim of a negative condition and that what he is seeking is a capacity for affirmation. When, on the other hand, he is told that what he must endeavour to do is to acquire the power of discarding demoralising thought

and fancies that haunt him and keep him from fulfilling his physiological resting, he realises that he is being urged to affirmation. Especially is this true if he is told that not only must he compel himself to discard these terrors of the night but that he must replace them with purer, higher and restraining thoughts. Such procedure is the fabric of all moral progress and it is the basis of cure of many functional nervous affections. The power of the will over thoughts varies with the individual as everyone knows. There are many thoughts which we would banish from the mind forever were it possible to do so. But they come in stealthily and oftentimes concealed with a flood of others like an unwelcome guest who gets in the house to which he has been forbidden when the doors are thrown wide open for a public reception. The oftener such a guest is forcibly ejected, the less often will he present himself. It is much the same way with unwelcome demoralising thoughts. The mind that is constantly dwelling upon past faults or considering with fear what the future holds in store must be disciplined. Discipline does not imply punishment. It may mean so-

ciety, travel, diversion, play, religion. But before any of these, save the last, can do any good, the individual must realise that he was not created to punish himself, but simply to be useful and happy and to make others useful and happy. Most of us have an underlying belief that mankind is right in declaring throughout its history that happiness, the sort of happiness that makes life worth living, is bound up with effective effort.

The real test of any cure for insomnia is the degree and kind of happiness it leaves behind it. Happiness of an indefinite sort is not enough for the man who discriminates; he must have happiness of a kind that will wear and which is a *quid pro quo* in the market-place where he trades endeavour for satisfaction. It is the toughness of the fibre of his happiness, its power to endure a shock and stand before the blazing light of reality, which will determine whether it has been worth while to fight the battle against sleeplessness. To-day fewer men than ever believe that this land of happiness can be the possession of any man who has not added to his power to believe, the power to will the effective



accomplishment of independent tasks. The man who knows what he wants and why he wants it, the man who believes in the legitimacy of his desire to possess a will to sleep, who wants this not simply because he is suffering a present annoyance but because he longs to be set free for more effective work, may take heart. His suffering can be cured.

CHAPTER II

DEGREES AND VARIETIES OF INSOMNIA

The capacity to sleep can be acquired by effort in the same way as the capacity to think concretely or to run without getting out of breath. We know that many men whom we now class among the immortals possessed this capacity to sleep to a most unusual degree—Shelley, Napoleon, Brougham.

It is related of the poet that no matter how harassing the family relationship became he could go to sleep at will. It seems incredible that a man of the energy, enthusiasm, activity, vigour and variety of intellect and ambition of Brougham could also switch on sleep as one turns on electric light. It is not unlikely that it was to this ability that he owed his remarkable longevity, or rather the retention of his faculties until four score years and ten. When one recalls the physical and mental activities of this

extraordinary man one wonders how the workings of such a brain could be shut off and turned on at will.

Circumstances and things apparently trivial may cause insomnia. A celebrated German physician, Strumpell, has published a story of a patient afflicted with a disease which made him insensitive to touch and temperature and who went to sleep immediately when his eyes and ears, the two remaining sense organs, were closed.

Convenience directed us to work in the light and sleep in the dark, and custom has confirmed these directions, adding to darkness perfect quiet and bodily comfort. But man can learn to sleep without these easy introductions. Boilermakers grow accustomed to taking their rest beneath the clang of their comrades' rivet-hammers, and the overworked, busy practitioner of medicine has often to get his sleep by taking naps of a few minutes' duration as he is driven from the home of one patient to another. Everyone knows how astonished the countryman is on coming to the metropolis to find that his city cousin sleeps peacefully through the clang

and thunder of cable cars, elevated railway trains, and the countless noises of the street which to his bucolic soul make night hideous. On the other hand, the city cousin who visits the old farm finds the crowing of cocks, the barking of dogs, the interminable conflict of "Katy did" and "Katy didn't," and the early twittering of birds infinitely worse than the roar and clang of the city. The question is merely one of habit as admirably set forth in the ancient ditty:—

An old lady who lived by the shore,
At length got so used to the roar
That she never could sleep
Unless someone would keep
A-pounding away at the door!

Three Classes of Insomniacs.—The causes of insomnia are countless, varying from an unkind word to a serious mental or bodily illness. It facilitates recognition of the causes of insomnia to classify the conditions to which it bears relationship. For instance, one class of patients have great difficulty in getting to sleep. If they are allowed to prolong their slumbers into morning, there are usually no ill consequences,

but as duty compels them to rise at a stated time, many of them suffer from the effects of curtailed sleep and it is this class particularly in whom fear of not getting to sleep and distressing impotent efforts to secure sleep combine to exhaust the victim's strength and energy. This variety of sleeplessness has a fairly uniform causation. It is dependent upon mental conditions, excitement, fear, dread, anxiety, overwork and use of intoxicants or stimulants, particularly tea. Not infrequently such insomnia has its beginning in intentional and deliberate curtailment of sleep, in order to give more time to work.

It is the commonest form of sleeplessness in those who carry their troubles and their labours to bed with them. It is the sleeplessness which afflicts the individual who has engaged in an argument or altercation where perhaps his vanity has been wounded or his feelings hurt. It is the form of insomnia experienced by the anxious mother, the possessor of a weak heart, or by the individual who has recently been listening to the plaudits attending his efforts.

Another class of insomniacs is made up of

those who experience a profound drowsiness terminating, often against the patient's will, in unrefreshing slumber of variable duration which comes on early in the evening, followed either by repeated and apparently causeless awakenings, or by abrupt and complete awakening with mental alertness, but often with depression of spirits. Here again the ego which dominates the individual takes great delight in unwinding a scroll upon which is written in glittering letters a record of the infirmities of the spirit, or upon which is painted by the unforgetting brush of memory certain bitter or miserable incidents in the past, the contemplation of which revives the old emotions, awakens the old suffering and banishes all possibility of sleep. Insomnia of this kind is most commonly associated with some variety of self-poisoning, usually arising from indigestion and constipation and what is technically called "auto-intoxication." Occurring in persons after middle life, it is not infrequently an expression of impaired elasticity of the blood vessels, the beginning of that disease which is now having what might be called a conventional popularity, viz.—arterio-

sclerosis. This form of disturbed sleep is of course much more common in so-called nervous persons, especially in those who take alcoholic stimulants, than in phlegmatic individuals. Physicans have found out that the early manifestations of disorder of the circulation of the blood may be recognised more unmistakably by certain methods of instrumental examination than by any other means. They have learned also that this condition can be cured.

The third variety of sleeplessness, classifying sleeplessness now according to the time of its occurrence, is technically spoken of as dysomnia in contradistinction to insomnia. Here the adequate number of hours is apparently obtained but there is lacking that feeling of refreshment and invigoration which should come after normal sleep. The tired body and the exhausted mind craves sleep so keenly that at first it comes on very profoundly and then abruptly, the victim awakens to find that his mind is carrying on its particular problems at exactly the same point, and in quite the same way, as before he went to sleep.

Insomnia in Health and in Disease.—Insom-

nia in one form or another accompanies nearly every disorder of the health, but it occurs also in individuals who are entirely well. In the majority of instances it is a state of mind founded in fear and apprehension. But frequently it can be ascribed to a direct and immediate physical cause, indigestion for instance, or toothache.

Of all the physical causes of insomnia, as distinct from the mental, none is so positive or prevalent as indigestion. We take so many liberties with the functions of our body that we easily forget that the digestive tract is the main road to health and efficiency. Very few have the good fortune to reach middle age without having experienced some disorder of digestion. The effects of such disorder may be revealed in many ways, but the commonest way, especially in persons with what is popularly called the nervous temperament is through disorder of sleep.

Sleep disturbances from indigestion are apt to occur in brain-workers, in persons of a sedentary occupation and in those who are exposed to harassing, anxious and depressing emo-

tional experiences. Anxiety, worry, consternation, terror and grief, emotions which most of us experience at one time or another, have their effect first upon the digestion and then in turn upon the various other functions of the body.

Although I purposely refrain from enumerating the various diseases which cause insomnia, special mention must be made of the sleeplessness resulting from influenza. In my experience it is most obstinate and taxes the resources of the patient and of the physician.

Insomnia may be, and often is, an accompaniment of certain specific diseases both acute and chronic, but this sort of insomnia is almost invariably self-limited and ceases when the disease terminates. In other cases insomnia is due to intoxication from poisons arising within the system, such as those accompanying disorders of digestion, gout, rheumatism, diabetes and excessive bodily fatigue. It is much more often, however, the result of poisons taken into the system, such as tobacco, tea, coffee and drugs, such as strychnine and so-called nerve tonics of one kind or another all of which contain circulatory excitants. That certain stimulants,

particularly tea and coffee, are powerful agencies in the prevention of sleep is undisputed. There are many persons, however, who can drink a cup of strong black coffee and immediately proceed to bed and to sleep as though they had quaffed the cup of Lethe. Probably coffee is a more potent agency in causing wakefulness than tea because it is a more fundamental stimulant and its effect upon the heart and blood-vessels is more pronounced. Tea, however, has a unique capacity for causing wakefulness in a certain type of nervous individuals, the intermediate cause being generally flatulent dyspepsia. It may be remarked, by the way, that much of the sleeplessness attributed to the after-dinner coffee may legitimately be laid to the dinner which preceded the coffee.

Cases of insomnia that are caused by drug addiction, such as opium or cocaine, are particularly obstinate and require the most rigorous kind of treatment. They are as difficult to conquer as the insomnia presaging and accompanying mental diseases.

The occurrence of insomnia signifies that the mental, emotional or somatic machinery is out

of order. Before it will run well again the cause of the disorder must be found and overcome.

Sleep is an endowment, like charm or a good disposition. It can be added to by cultivation and effort or it can be shattered. Originally it may have been meted out alike to the rich and the poor, but in the present stage of evolution there would seem to be much discrimination. It is a fact that insomnia is much rarer amongst the poor than amongst the wealthy and it is remarkable how seldom complaint of insomnia is heard from the lower class of hospital patients. The explanation possibly is that insomnia frequently flows out of overfeeding, idleness, self-absorption and ennui, and the labouring poor are not beset by any of these ills. It may be that they regard sleeplessness as a minor ailment and do not mention it, but it is more likely that they are less subject to many causes of sleeplessness than their envied brothers.

CHAPTER III

THEORIES AND PHENOMENA OF SLEEP

The problem that confronts the victim of insomnia is to determine why he does not sleep soundly, adequately or refreshingly. To do this he should know the significance of sleep and something of its theories.

There has been a vast amount of study and experimentation by physicians and psychologists to discover the so-called cause of sleep. As to its virtue there can be no discussion. "To sleep," wrote Amiel, "is to strain and purify our emotions, to deposit the mud of life, to calm the fever of the soul, to return into the bosom of maternal nature, thence to reissue, healed and strong. Sleep is a sort of innocence and purification. Blessed be he who gave it to the poor sons of man as the sure and faithful companion of life, our daily healer and consoler."

The human being asleep, is in a state of total

unconsciousness. All cognizance of personality and action and, for the most part, man's sense and ideas cease to exist. It is not possible to decide to what extent this abnegation of the conscious life, these intimations of oblivion, are merely a seeming and a forgetting. The chance recall of dreams warns us of the possible existence of mental phenomena during the sleeping state which, under ordinary circumstances of life, do not connect themselves with the conscious memory.

Theories of Sleep.—The nature and cause of sleep are still a mystery. Many theories as to the underlying causes of sleep, that is, of the physical and chemical changes that occur in the brain and other parts of the body during sleep, have been propounded.

The first theory. The most generally accepted one is that sleep is accompanied by a diminution in volume and velocity of the blood in the brain, and that this is the physical basis of sleep. This theory makes sleep akin to the unconsciousness which attends what is popularly called fainting. Those who attempt to explain sleep in this fashion claim that insomnia

is the expression of the opposite state, namely an excess of blood in the brain, an exaggerated blood pressure and increased velocity.

The second theory. A more recent theory is that the physical basis of sleep is a certain physical alteration in particular prolongations of the cells or units of which the brain is largely constructed. Each nerve cell has a number of processes which jut out from its side like the feet of a centipede. These are called "dendrites." These processes come in contact with those of other cells and in this way form a continuous link. When they are thus continuous, the current (of whatever nature it is), that is necessary to consciousness flows through harmoniously. When the contact is broken the current ceases to flow and the result is sleep. Consciousness is unquestionably due to a certain state of the nerve cells and any departure from complete consciousness must be due to some change in this condition. It is probable that this state and its alterations are of a chemical nature.

The third theory. The chemical theory of sleep is one which has a wide acceptance

amongst those who have studied the subject. It is based upon the hypothesis that during the waking hours there is developed, and to some measure accumulated within the system, by-products of the system's activities, and that these, soporific in their effect, produce a sensation of tranquillity, drowsiness and sleep. When sleep occurs, the tissues concerned in producing poisonous products cease their activity. The substances which were produced and which acted as soporific are thrown off during the night and when they are all eliminated the cells are ready to start in fresh. Then the cycle is repeated.

These theories testify to man's ingenuity. There is no doubt whatsoever that cellular activity, whether it be muscle cells, gland cells or brain cells, is accompanied by formation of products which, if retained in the system, are poisonous, but it is difficult to see the justification for contending that this is the cause of sleep.

The fourth theory. The interpretation of sleep as one of the essential phenomena of life has recently been elaborated into a theory which

is called the biological theory. Claparéde contends that sleep is a phenomenon of nature in the shape of a reaction of defence to protect the organisation against fatigue. Sleep is an instinct, and we sleep not because we are exhausted, but because we cannot help it. Like every instinct it is a manifestation of evolutionary development. It did not exist at all times and it is not in any way an essential phenomenon of life. If sleep has developed, it is probably due to the fact that those animals whose activity was broken by periods of repose or immobility have been favoured in the struggle for existence, for they have been enabled, owing to an accumulation of energy during these periods, to manifest, in consequence, a more intense activity. As to these periods of immobility, they are themselves derived from the function of cessation of defence which plays such a great rôle in the animal kingdom.

Unquestionably the position taken by Claparéde will be acceptable to scientists. It harmonises with what the physiologist and psychologist know about sleep and its physical basis.

Sleep is a resting state of consciousness

which is facilitated, and, if one likes to affirm it, caused, by cessation or interruption of all those stimuli that come from without, and which reach the human organisation principally through the special senses.

Phenomena of Sleep.—The velocity of the circulation, and of the respiration is diminished during sleep. The pulse of sleeping individuals is slow and full as compared to that of the waking state. Breathing is more deliberate, sometimes laboured. Digestion and absorption may take their course with unabated vigour, but the blood supply of the brain and the organs under voluntary control is diminished. The temperature of the body is lowered during sleep. And all the secretions, except that of the skin, are lessened. The urine, saliva, the secretions from the mucous membranes are all less abundant in sleep than in waking. Perspiration, however, is frequently increased instead of diminished, not only as a result of relaxation of the vessels in sleep, but particularly from the custom, which is almost universal, of covering the body with layers of clothing that prevent radiation of bodily heat.

Most of the so-called reflexes are diminished or abolished. The fact that not all the reflexes are abolished is shown by the existence of respiration and heart pulsation. There are other reflexes which are neither diminished or arrested during sleep, for instance, those guarding the chief elemental portals of the body. No general statement can be made as to which are abolished, because a considerable difference obtains, in this respect, between the various species, and even between individuals of the same species.

That there are different degrees of sleep goes without saying. We constantly hear persons speak of deep, light sleep, and broken sleep. Besides there is every gradation between complete wakefulness and profound sleep. Sleep may vary in intensity or depth from a semi-conscious state in which complete ideas and sensations may subsequently be recalled either in whole or in part, to an absolute dreamless state. This temporary abeyance of consciousness, whether complete or partial, is without doubt associated with cessation of the acquired functions of the brain. It is perhaps safe to say that the progression from light to deep

sleep marks a gradual diminution of the functions of the brain.

One cannot say that there is absolute cessation of the functions of the brain during sleep, although there seems to be. It has frequently been alleged that mathematical problems have been solved during sleep, that poetry and music have been composed, but in reality what has happened is that the whole body, having been rested during sleep (the whole body with which we think), takes up the problem with which it had previously been concerned and finishes it satisfactorily.

Increasing depth of sleep is marked by the same progressive diminution of many or of all the functions of the body. The closer the functions are associated with consciousness and especially with the will of the individual, the more completely are the functions suppressed. Depth of sleep is therefore not only proportioned to the abeyance of consciousness but also the depression of all bodily functions. The state of sleeplessness or insomnia may therefore be indicated as an approach to the normal waking, physical and mental condition. The

main distressing feature of insomnia is the persistent continuance of mental activity in some form.

Whatever may be our explanation of sleep, it is certain that we cannot do without it. Patients oftentimes tell us that they have not slept a wink all night, but we may be sure that such a state of wakefulness cannot be maintained for more than a night or two.

Tales of extraordinary capacity for going without sleep excite a ready interest, and the public reads with avidity the records of great and famous personages regarding a matter in which all participate, and about which everyone has something peculiar to relate.

It is said that John Wesley found that five hours' sleep sufficed him, but he was often seen asleep whilst riding on his horse. It may have been with him as with many others; little naps in the day are overlooked in the calculation of the sleep obtained at night. A momentary sleep often suffices to produce the rest that is needed.

It is generally believed that one-third of our existence should be spent in sleep, but this is no more true than that the preservation of health

requires us to partake of food three times a day or to drink three pints of water in twenty-four hours.

Insomnia is a relative term. The amount of sleep that suffices for one individual would be in another productive of misery and a disorder of nutrition which might lead to disease. Sleep is measured by its depth as well as by its duration, and it is as difficult to express in minutes or in hours the requisite quantity of sleep for the normal human being, as it is to state the proper degree of depth of sleep. Experience teaches that the deeper the sleep, in other words, the more profound the cessation of mental and bodily functions, the less protracted need that sleep be in order that the individual may receive physical and mental restoration and refreshment.

Sleep may indeed be indulged in to excess. Too much sleep produces lassitude and debases and stupefies the mind. Carried to extreme it is as much an act of intemperance as excessive drinking and eating.

As to the time when sleep should be taken, night is of course preferable since it is the time when the sleeper is least likely to be disturbed

by stimuli coming from without, such as light and noise. There is no evidence, however, to show that, were light and noise controllable, sleep obtained during the day would be less beneficial than sleep obtained at night.

CHAPTER IV

INSOMNIA DUE TO PHYSICAL CAUSES

Before attempting to instruct the sleepless as to the method and manner of overcoming insomnia the form and character of the evil from which they suffer must be ascertained.

Insomnia not a Disease.—Insomnia is a symptom, not a disease. It is a derivative, a by-product, the effect of definite causes, which must first be removed before any progress can be reasonably expected in the work of regaining sleep. For the purpose of determining the proper treatment to be adopted, it may be well to divide insomnia broadly into two distinct classes. First, insomnia springing from purely physical causes. Second, insomnia derived from mental, moral or emotional causes.

The first has its origin in physical pain or discomfort. It may be a mashed thumb, rheumatism, cold feet, indigestion, influenza or the

toothache. Generally the treatment here is simple. Remove the cause and the effect will disappear. Ease the aching tooth and sleep will come.

The other insomnia is born from grief, cares, expectations, anxieties, great business, and all violent perturbations of the mind. It may be due to anything that exalts, excites and makes unaccustomed appeal to the special senses. This is the most persistent variety. Not infrequently it is the initial symptom of many mental diseases.

Insomnia derived from this disordered mental condition is prone to engender in the mind of the sufferer the fear of approaching insanity. "I am sure I shall go mad," is a frequent statement from insomniacs of this character. Fortunately this fear is groundless. Sleeplessness does not cause insanity. The victim may become depressed, irritable, excitable, inattentive, but his senses will not forsake him. I have seen so much suffering result from ignorance of this fact that I purposely emphasise it here. Fear of disease is sometimes worse than the disease itself and the suffering incidental to such

fear cannot be measured. The unhappy and unfortunate victim of insomnia has enough to contend with. Let him banish forever the fear that the integrity of his mind is threatened.

Before taking up the detailed analysis of mental insomnia, let us consider the less complex form of physical insomnia.

"Physical" Insomnia.—Grouped under this head are many passing discomforts which, from the fact that they occasion only temporary sleeplessness, only enter incidentally into a study of insomnia. A slight irritation of the throat accompanied by an annoying tickling sensation of the larynx is quite sufficient to keep the emotional human being awake. Trivial matters such as chilblains or an itching skin disturb sleep as effectively as rheumatism or indigestion. Where spraying the throat or anointing the inflamed epidermis with some oleaginous salve will readily effect a cure of the minor ailments cited; however, in the case of indigestion or rheumatism the matter is not so simple.

Indigestion is of many kinds and varieties. We speak of stomachic indigestion and intestinal indigestion, of indigestion due to perversion

of the digestive juices, to disturbances of motility of the digestive tract, to the formation of such deleterious processes as fermentation, to a disturbed nerve supply of the digestive organs, etc. It is unnecessary to consider the different forms here in order to discuss the treatment of insomnia which results from indigestion, except to say that success can attend our efforts only when the underlying cause of insomnia, namely, the indigestion, is sought, detected and successfully combated. Of all the varieties of indigestion which cause disturbed sleep those which are attended with fermentation, especially when this provokes flatulency and pain, are the most important. In making this statement it is realised that one of the most obstinate forms of insomnia to overcome is the variety dependent upon disturbance of circulation, such as arteriosclerosis which in turn is dependent upon chronic indigestion and fermentative processes in the intestines.

The victim of indigestion who does not put himself in the hands of a physician who will determine the underlying cause, is not giving himself a fair chance. Much is heard nowadays of

the necessity of popular lectures to familiarise the average intelligent laity with the findings of science. I know of no field that would yield a more favourable or beneficial crop of information than the plain and truthful setting forth of the fact that medicines are practically of little or no use in the treatment of chronic diseases or any other diseases, save temporary functional provisions of the different organs of the body.

Unless one happens to be a member of a drug-taking family, or a physician, and especially a hospital physician, it is almost impossible to realise the bondage in which drugs hold many of our fellow beings. The indiscriminate taking of drugs apparently has no relationship to intelligence and common sense. Men and women whose daily life and work testify to their equanimity, their good sense and sound judgment, pour drugs into themselves for the relief of this or that minor ailment, in a way that transcends all understanding. And for no disturbance of functions are drugs taken so indiscriminately as for disorder of the digestion.

The amount of money spent on pepsin, pancreatin, takadiastase, charcoal and so-called in-

testinal disinfectants in this country could establish a fund, which, if wisely used for popular education, would in one generation do more to overcome indigestion than all the drugs in the world. To many it will come as a decided shock that there is scarcely a particle of evidence to show that any of the substances enumerated above are of any value. The most elaborate investigations made on intestinal fermentation to demonstrate the value of so-called intestinal antiseptics have shown conclusively that the only drugs which have any effect in diminishing fermentative processes in the intestines are those which stimulate the action of the intestines to remove the offending substance from the body.

One of the common manifestations of such indigestion is flatulency. Flatulency, which seems to be the immediate provoker of sleeplessness, often produces its worst effects, when we are not conscious of its existence, by eructation or expulsion of gas. When we suffer from flatulency in the ordinary sense, we are conscious of the desire to get rid of, or disperse, the gas. When it is tolerated by the stomach this

gas produces an oppressive pain around the heart.

Of the many expedients that may be utilised for the treatment of sleeplessness due to flatulence, the simplest is a glass of hot water at bedtime and it is usually effectual. Its efficiency may sometimes be enhanced by the addition of a simple aromatic, such as a few drops of spirits of peppermint or aromatic spirits of ammonia. It should be taken a half hour before going to bed, as the movements of undressing facilitate the expulsion of gas from the stomach either by eructation or by sweeping it into small intestines where contact with the bile, which is antiseptic, prevents further fermentation. If this simple remedy is not adequate, the administration of a teaspoonful of compound tincture of cardamom may be added.

Dry heat to the pit of the stomach, such as a hot water bag or a hot plate, or vigorous friction and manipulation of the abdomen, is sometimes very serviceable. In cases of flatulency that are rebellious to these simple measures, it is essential that the contents of the stomach be taken and analysed in order that the cause of

fermentation be determined. It is in such cases that washing out of the stomach is oftentimes of signal service.

There are many conditions of circulation that cause insomnia. Among these, cold feet is the most important. It is, I fancy, the commonest immediate cause of insomnia. Itself a symptom of disordered digestion, constipation, anæmia or other disease, it stands Cerberus-like between the disorder and Nature's restorer. The condition of which it is the expression may have to be thwarted before it is overcome.

Much can be done to counteract its effect by a few simple measures, such as holding the feet for a few seconds alternately under a stream of hot and cold water, then frictioning the feet and legs vigorously and enveloping them in warm flannel up to and above the knees. It is incredible how much difficulty has been encountered in getting this simple and frequently efficacious measure carried out. It is too much trouble for the majority of those to whom it is recommended. A hot water bottle is so much easier though it is much less useful. It may be that the languor and weakness which

such persons display are but a part of the general sluggishness of circulation indicated by the coldness of the extremities.

Coldness of the feet is apparently the cause of sleeplessness in many brain-workers who are free from anæmia and poor circulation of blood. It is not a negative coldness which can be overcome by external warmth. It has to be righted through the general circulation. It is in such cases that a hot, mildly stimulating drink such as hot milk, cocoa or beef extract, on retiring is most beneficial. Such a procedure is particularly potent in overcoming insomnia if the feet are thrust into cold water and vigorously rubbed for a few minutes.

Sleeplessness due to burning sensation in the feet is a more stubborn cause of dysomnia than cold feet, for when it occurs in its most exaggerated form it is an indication of some graver disorder than cold feet. The treatment of it is the treatment of the underlying cause.

Insomnia associated with, or dependent upon, structural disease of the blood vessels known as arteriosclerosis is often most rebellious to treatment. In every case of such arterial disease

it is essential that the blood pressure or arterial tension shall be determined, and this can be done only by the physician. It is a well-established fact that high blood pressure and insomnia often go together. There again it is essential to search for and counteract or remove the cause of the arterial tension. In the majority of instances this is some form of intoxication arising within the system or the expression of such disorder of metabolism as gout or diabetes, any of which calls for the most rigid dietetic treatment. Indigestion in one form or another, but particularly fermentative intestinal indigestion, is the common forerunner of these conditions, and I shall refer to the treatment of it when discussing the relationship of dyspepsia to insomnia.

The insomnia of arteriosclerosis is often successfully combated temporarily by instructing the patient to take a small amount of stimulant such as whisky and hot water or milk before retiring and repeat this early in the morning.

While the insomnia that springs from physical pain or discomfort is easier to eradicate than that which originates from mental or emotional

causes, it frequently happens that through failure to combat the ailment in its milder manifestation, what was at first but a physical reflex becomes mental also. The principle "Mens sana in corpore sano" applies to nothing so aptly as to insomnia. If the body be healthy the mind will be sound. It is when the body is driven from day to day in a condition half way between sickness and health with perhaps a disabled kidney or liver insidiously sapping away life's elixir, that the foundation is laid for one of the most persistent forms of insomnia.

The patient will not ascribe his inability to sleep to malnutrition or to poor circulation, and since his mind is free from mental anxiety concerning the stock market or his wife's coquettishness, he will be at a loss to explain his sleeplessness to himself. At this point he will be likely to take quick alarm at his condition and to jump at the conclusion that his inability to sleep is a disease in itself and not merely a symptom. He will become panic-stricken at the apparently inexplainable, and instead of harbouring the constructive thought of sleep will fasten and brood upon the destructive thought of insomnia.

CHAPTER V

INSOMNIA FROM MENTAL CAUSES

The normal human being is born with the desire and the intention to spend a considerable portion of his time in sleep. Whether he works or plays he will still expect to add a period of oblivion to all things that make a direct appeal to his senses. He may exercise up to a certain point his power of choice to postpone or reduce this period of oblivion but he will always pay the full price for doing so in loss of comfort and efficiency during the waking period thus unwarrantably lengthened.

The law of sleep is the law of life. Failure to observe it must inevitably result in physical bankruptcy. Anyone who sets aside his intention and desire to sleep will find in the long run that he has set aside to some degree his desire and intention to live.

"Mental" Insomnia.—In the majority of cases in which insomnia is directly traceable to

absence of mental tranquillity, it will be found that in the earlier stages the wakefulness was deliberate and intentional. The individual who goes to bed with the will to remain awake will readily achieve his purpose if he continue to feed thoughts to his brain. It may be that in a few hours before retiring he has been under some violent mental excitement. He may have attended some important public function where his eloquence has won him applause. He may have taken part in some heated altercation over politics or cards. He may have been emotionally stirred by some slight, real or fancied, administered by one dear to him. Business may have been suddenly upset or perhaps is simply in danger of being upset. Stocks may be going up—or down.

In any of these contingencies, and a thousand others, sleep will be deliberately and intentionally banished. The mind will be kept active from choice, reviewing the social triumph achieved a few hours earlier or recalling this or that unpleasant epithet hurled in an angry moment. Whether it be the young débutante dancing over her dances in retrospect or the

man of business following the details of an intricate deal soon to be consummated, minutes, even hours, elapse before he or she will even register the thought "Better leave all this and go to sleep."

If the mental excitement has been natural and reasonably moderate, the individual may pass into unconsciousness with this imposition of the will to sleep, even though long delayed. If, however, the mental excitement has been unusual or of great intensity, it frequently happens that by the time the individual records this intention and desire to sleep, the brain which he has goaded and spurred into a feverish gallop refuses to stop. The mind refuses to obey and the same thoughts, at first summoned with deliberate intent, return as unbidden guests and defy every effort made to dislodge them.

If the incident giving rise to this uncontrolable effervescence of mind is of momentary duration only, that is, if it is of a character to be easily dismissed on the morrow because of its having been concluded and ended, then the victim will have been at a loss of just one night's sleep. But if the cause of the mental perturba-

tion is a continuing cause, if, let us say, the stock market is still moving contrary to the desire and interests of the casual insomniac of the night before, then there is danger of a second night being spent as fruitlessly as the first. His condition will become aggravated from the fact that his thoughts by losing nothing in insistency will lose in meaning and significance. While active enough to keep him awake, they will cease to interest or engross him. He will think mechanically and uncomprehendingly. The same thought will obtrude itself again and again. He will be drowned in it, made deaf by it. The buzzing of a mosquito, heeded for a period of ten seconds, may be found to have some element of melody to it, but continued for hours it irritates to the point of frenzy. In the same way the tenacity of that single meaningless idea, throbbing away unceasingly in his brain, will develop into bodily irritation and loss of temper. This will result in hurried heart action and heightened temperature and carry the victim into another wakeful day, tired, nervous and ill-natured.

It is perhaps at this stage that his greatest

danger will confront him—the FEAR of insomnia.

When those who have been a prey to the sleep-dispelling mental obsessions described, approach the hour for going to bed, not only fearful that they may not sleep, but with a firm conviction that they will not sleep, their condition may be viewed with alarm. Such an attitude is negative and very naturally conducive to sleeplessness.

The insomniac who repeats to himself that he will not sleep is adding momentum to his descent into the lowest pit of sleeplessness with every repetition of the thought. Just as it only requires so many reiterated declarations of "I will sleep" in order to bring on slumber, so will it only require a certain number of repetitions of " I will not sleep " in order to bring on wakefulness. And the longer this negative thought is harboured, the harder will it be to dislodge it.

It is vital that insomniacs of this character cultivate and acquire the right point of view. They must learn to view their infirmity in the right perspective. To be sure, a little insomnia disturbs the aspect of the whole world and it

early becomes impossible for the victim of it to take an impersonal view of his disability. He dreads the advent of the night as the wedding guests dreaded the coming of the Ancient Mariner. He sees in anticipation a repetition of past performances from which he emerged dismayed, desolate and despairing. He is convinced that he will not sleep and frequently he needs more than verbal assurance to have this conviction dislodged. The victim of this sort of wakefulness must help to overcome his difficulty by cultivating a will to sleep. All deliberate tasks of the will are irksome and it is easier to follow along the line of compelling natural desires. But the constructive point of view to be acquired in combating insomnia is that sleep is a compelling natural desire. The will to stay awake is easier than the will to sleep, because the incentive to the former is very keen at the time when it is first essayed. But in the normal man, the will to remain awake is short-lived. It is short-lived from the point of view of comfort and not very long-lived from the point of view of safety.

The insomniac should be encouraged by the

realisation of the fact that the distribution of sleep and wakefulness is a process which goes on according to natural law and is not wholly, perhaps very little, subject to immediate direction of the human will. The natural law is to sleep and the will to obey this law is the natural will. When, therefore, we seek to persuade the sufferer from wakefulness to cultivate a will to sleep, to develop a method where before he had been playing a speculative game, we are, in fact, simply asking him to conform to a natural law.

If the insomniac should feel confused before the question of what will is, we can say to him, "Put the whole matter on the ground of desire. Imbue yourself with the idea that what a man most ardently desires, that will he get, and remember that man's most ardent desire is as nothing compared with Nature's desire."

When Nature desires that we should sleep, it is no light and trivial whim that may be waived lightly aside, but a formal and definite command, transgressed at heavy cost. We cannot bargain over this matter. We cannot modify Nature's age-long will that we should sleep by offering her tithes from the fruits of

forced wakefulness. Sleep is the method by which we obtain wakefulness. It is the thing first to be desired because through it alone comes wakefulness. It is to be desired not in some wilful, fitful, coquettish way, but in Nature's way: imperiously, systematically and without abatement. The law of sleep towers above man's activities as high as the laws of Nature raise themselves above the rules of men.

Nature's method is not that of extended wakefulness but of systematised distribution of waking and sleeping, profoundly restful sleep on the one hand and systematised expenditure of efficient efforts during wakefulness on the other. When this systematic allotment has been fundamentally disturbed, the unfortunate individual is face to face with a condition from which he ought to be willing to seek deliverance at any cost. He is the victim of misplaced confidence, a relic of misdirected endeavour. Once on a time he knew what sleep was—oblivion, an uncharted country, known only in terms of its borderlands. Like most people who know too much about the unknown, he now suffers through the possession of a new and particular

kind of knowledge. He knows at heavy expense to himself a state that is neither good sleeping nor good waking, a state negative of all good results, for which there is the especially coined word INSOMNIA. Its special characteristic may be defined as the absence or negation of that degree of sleep which we find to be grateful and at the same time necessary for the formation of successful and happy living. It is a strange form of being awake, toward which we are most bitterly antagonistic. No light of happy sentiment plays about it. It is shrouded in the darkness of lost desire and only one clear ray of understanding sweeps across its gloom: "Sleep is gone, sleep has not come." All this the insomniac feels and says to himself more or less clearly. But it is necessary if he would abandon the undesired freedom which wakefulness brings him and deliver himself bound with the chains of the good tyrant SLEEP, for him to get out of the region of sentiment and feeling and into the region of Will and Endeavour. He must make friends and become partner of the indispensable state of Sleep. He must follow the dictates of common sense and common

experience toward a state which brings him to his liveliest sense of power and his deepest sense of well-being. He must make it one of his routine and unqualified affirmations that he wants sleep of the sort and amount that will make him most efficiently active in those hours when it goes away, and which leave him to the great business of living properly and happily. He must cease his useless endeavour to think about insomnia, to solve its mysteries, to measure its dangers, and to mitigate its discomforts. It is towards Sleep that he must turn his attention. To solve its secrets should be his endeavour. To be able to turn the key which opens its doors or at least to hide the key with which either his friend or his enemy would shut the door against him and bar him out, should be his highest aspiration.

CHAPTER VI

DREAMS

Among the most common disturbances of sleep are dreams. This subconscious state is typical of the lighter stages of sleep, and in the vast majority of instances occurs just before waking and after sleep is complete or practically so. Because of this, the disturbance occasioned is not serious and generally plays only a small rôle in the causation of insomnia.

Though dreams may not disturb sleep materially, their effect upon the sleeper, particularly if he retain the memory of them, can have serious consequences. Dreams that shock and which return with persistence into the memory of the patient may give rise to tenacious obsession and so disquiet the mind during the wakeful period as to act as a barrier to sleep. Most dreamers, however, give up the memory of their dream immediately upon waking and go through the every-day routine none the worse for hav-

ing had them. The relationship between dreams and sound sleep is a very close one. Since time immemorial, dreams have given rise to the exercise of much ingenuity in their interpretation. The significance which Joseph put upon those related to his brethren is an elementary lesson in symbolism compared to the interpretations put upon them by a modern son of Israel, of Vienna. According to Freud, a dream consists merely of the dreamer's disturbed waking experiences, whether these be suppressed painful memories of the waking life or whether they be experiences of which the individual is not aware because he has not made conscious note of it.

Sleep disturbances have their origin in our waking experiences and although we are not able to trace the origin of a particular dream, it is because we are not able to ferret out the dormant memories of subconscious episodes of long ago. No matter how distorted or fantastic dreams may seem, they are memories of previous experiences. Oftentimes these experiences are the property only of what is known as the subconscious mental life. In sleep the

censorship of waking consciousness is removed and then suppressed or disassociated experiences stalk forth and occupy the stage. Freud traces the origin of most of the functional nervous diseases by the pursuit of clues furnished only by dreams.

During the last few years much attention has been paid to dreams, and there are those who contend that the information to be obtained from their study furnishes the key to the door which heretofore has guarded the secrets of the causation and existence of many states of ill-health variously called hysteria, obsession and chronic ill-health.

From the beginning of history dreams have been considered of portentous importance in giving information of future events. The present-day view is that they may be made to yield information concerning past events which the dreamer hides in his conscious state. There are those who maintain that there is no such thing as dreamless sleep. A recent writer on the subject, Sir Arthur Mitchell, while advancing this view, admits that it may be disputed. In the face of much testimony of many persons

who maintain that they do not recall ever having dreamed it is hard to establish a proof. But those who maintain that there is no such thing as dreamless sleep hold to their opinion on the basis that those who offer their experiences in opposition to this view actually do dream but do not remember it.

If we are asked to believe that we may dream and not be conscious of it, it becomes very difficult for anyone to state that there is no sleep without dreaming. This is on a par with the Christian Scientists who say "He is not dead" but whose family or friends go ahead and bury him as though he were dead. So far as the individual impersonating the corpse is concerned, it does not really matter.

Dreams and Sleeplessness.—The psychological question of whether or not the mind continues to be operative during sleep is what really concerns physicians and scientists. Do dreams disturb sleep? Do they take from its capacity for refreshment? The answer is, that it depends upon both the dreamer and the dream. If the dream picture some horror or distress, either physical or mental, it is obvious

that the dreamer will be anything but soothed thereby. If the dreamer be of a nervous temperament, the fictitious tragedy in which he will have played a part in his sleep will leave him troubled and unrefreshed. Just as there are dreams that terrify because of their nature and shock because of their immorality, there are others that comfort and restore.

In Locke's *Essay on Human Understanding* is found a sentence, " The dreams of sleeping men are all made up of waking men's ideas, though for the most part oddly put together." But considering the fact that morals and ethics are frequently entirely lacking in the dreams of the best and most refined, this can scarcely be accepted at the present day. It would shock us to know of the improper things which the most proper people do and think with unblushing effrontery in dreams. Passions which never for a moment visit our conscious moments, sentiments the very opposite of those belonging to our idiosyncrasies present themselves in sleep and are followed by their appropriate actions just as if we were then not ourselves at all. We commit the most ruthless

crimes without compunction or the smallest feeling of sorrow which in our waking hours would cause us unmitigated grief and remorse. Maudsley has said that if we were held responsible for what we do in our dreams there is no man living who would not deserve to be hung.

It has been proven by those who have studied dreams and their incidents that in a few minutes sleep a dream of such intricacy and involving such a variety of incidents has taken place that if it were to be acted out in reality months and years would be necessary.

Those who are distressed by having their sleep visited night after night by fantastic visions and nerve-shattering dream tragedies should bend all their efforts to the converting of their light and shallow slumber into sound and heavy sleep. The sounder the sleep, the less the opportunity for dreams. By purging our thoughts as much as we can of memories of a violent character, and closing our mind to all constructive or speculative thought we may be able to shut out a nightmare. Let the dreamer take comfort, however, in the thought that even though his dreams persist they occupy but a

few minutes of the hours spent in sleep and that his period of unrest is comparatively inconsequential and altogether insufficient to rob the period of rest of its restorative value.

CHAPTER VII

THE REQUISITE QUANTITY OF SLEEP

No BELIEF is more deeply rooted than that the average individual requires seven, eight or more hours of sleep. Like most firmly established popular conceptions, it is entirely unjustified. History abounds with examples of men whose existence was contemporaneous with some epochal transformation and who contributed immeasurably to the pleasures of life, who were able to do their work on half that amount of sleep. That it is possible to do intellectual work of the first order and to maintain a degree of vitality enabling its possessor to live out the scriptural allotment is evidenced by Herbert Spencer. "Appearances gave the impression that I was in fair health," he tells us in his autobiography. "Appetite and digestion were both good, and my bodily strength, seemingly not less than it had been, as tested by walking,

was equal to that of most men who lead town lives. This continued to be my state for many years. Both then and afterwards, my sleeping remained quite abnormal. A night of sound sleep was and has ever continued to be unknown to me: my best nights being such as would commonly be called bad ones save when leading a rural life with working and out door sports to occupy attention. It probably averaged between four and five hours of unconsciousness, but it was never continuous. The four or five hours were made up of bits; and if one of the bits was two hours long, it was something unusual. Ordinarily my nights had from a dozen to a score of wakings. Moreover, at that time and for five and twenty years after the sensation of drowsiness was never experienced."

This paragraph from the life's record of one of our greatest thinkers should reassure many an insomniac.

Rest Without Sleep.—The object of sleep is refreshment and this may be obtained in a measure from rest alone. If the insomniac can adopt the attitude that he will take as much re-

freshment as he can from rest alone and if he will put himself in the attitude of mind favourable to receive this frequently, sleep will steal upon him while he is resting. If he can convince himself that he is neither threatened with insanity nor a physical breakdown from a few nights of disturbed sleep and that he can get sufficient refreshment of mind and body from a few hours sleep plus a great deal of rest, he will have advanced a considerable way on the road to recovery. Too many sufferers from insomnia delude themselves into the belief that the number of hours of sleep that is good for them is the greatest number they can get. While the stress of sleeplessness is upon them, their appetite for it is similar to that for water in those parched with thirst. While in this state, they are sure that they could drink a bucket of water if it were at hand but when that amount and more is tendered them, their thirst is slaked with a few ounces.

Illustrious Insomniacs.—I have been able to assist many sufferers from sleeplessness by citing the example of such great insomniacs as

Charles Darwin. "His nights," his son tells us, " were generally bad and he often lay awake or sat up in bed for hours suffering much discomfort. He was troubled at night by the activity of his thoughts and would become exhausted by his mind working at some problem which he would willingly have dismissed. At night anything which had vexed or troubled him in the day would haunt him." Yet the testimony of this same son is that his children saw him despite this and his habitual suffering "full of pleasure in what pleased them," and the world owes him the greatest contribution ever made to the scientific conception of the origin of man. It should help insomniacs to take patience with their lot to read how this great man ordered his daily life that he might secure the fullest benefit from the few hours sleep that were vouchsafed him.

Napoleon, Frederick the Great, Charles XII, the Duke of Wellington, to mention but a few, were among the great men who considered sleep a luxury rather than a necessity and the old English saying:

"Nature requires five,
Custom gives seven,
Laziness takes nine,
And wickedness eleven,"

has more than a little truth in it.

Virgil and Horace, Franklin and Priestley, Parkhurst and Buffon, achieved their best work on a minimum of sleep. Sir Thomas Moore rose regularly every morning at four o'clock and so convinced was he of the beneficial effects of early rising that in his *Utopia,* he represented its inhabitants as attending lectures before sunrise. John Hunter, one of the world's greatest anatomists and surgeons, was able to retire to his dissections, his books and his writings, after a long and busy day in the active practice and teaching of surgery and after three or four hours sleep, arise fresh and vigorous for another day as full of work.

More than half a century ago a learned Scotchman, MacManish by name, wrote: "The same forces which regulate our desire for food also govern sleep. As we indulge in sleep in

moderation or excess, it becomes a blessing or a curse; in the one case recruiting the energies of nature, and diffusing vigour alike over the mind and frame, in the other debasing the character of man, stupefying his intellect, enfeebling his body and rendering him useless alike to others and to himself. The glutton, the drunkard, and the sloven, bear the strictest affinity to each other, both in the violation of nature's laws, and in the consequence hence entailed upon themselves. What in moderation is harmless or beneficial, in excess is a curse, and sleep, carried to the latter extreme, may be pronounced an act of intemperance almost as much as excessive drinking or eating."

Let the insomniac then take heart. A life of personal satisfaction and general usefulness is not inseparable from eight hours sleep nightly. If he can spend four or five hours each night in sleep, let him consider that much as food and every hour added as pleasant but unessential dessert.

Let him fill himself with the thought that rest may re-vitalise him quite as effectively as sleep, and, instead of tossing and turning and work-

ing himself into a temper, let him lie at ease in bed and relax his contracted muscles and nerves. He will not be injured by merely not sleeping. It is the unrest of his body and mind while he is not sleeping that will work him harm. Let him control his mind and body and maintain them passive and placid and insomnia will lose its horror for him.

CHAPTER VIII

SURROUNDINGS CONDUCIVE TO SLEEP

Whether or not the physical combine with the mental in causing insomnia, there are always certain conditions of stage setting, as it were, which if observed will facilitate, if not produce sleep. The general principles applicable to the treatment of sleeplessness must consider the individual and his environment. Some environments are contributory to slumber, peaceful and refreshing, just as others are provocative of wakefulness. One man, however, may sleep soundly in quarters and in an atmosphere that will move another to the most fundamental protest and rebellion.

The Bedroom.—The bedroom should be large and airy and light should be excluded therefrom, also all unnecessary hangings. A person suffering from insomnia should safeguard himself from all external stimuli which annoy and irritate him. As to ventilation, read Benjamin

Franklin on the advantage to be derived from sleeping in rooms that are properly aired. "It has been a great mistake," says he, "this sleeping in rooms exactly closed and in beds surrounded by curtains. No outward air that may come into you, is so unwholesome as the unchanged air, often breathed, of a close chamber. As boiling water does not grow hotter by longer boiling, if the particles that receive greater heat can escape, so living bodies do not putrefy, if the particles, as fast as they become putrid, can be thrown off. Nature expels them by the pores of the skin and lungs; and in a free open air they are carried off; but, in a close room, we receive them again and again, though they become more and more corrupt. A number of persons, crowded into a small room, thus spoil the air in a few minutes, and even render it mortal, as in the Black Hole at Calcutta. A single person is said to spoil only a gallon of air per minute, and therefore requires a longer time to spoil a chamberful; but it is done, however, in proportion and many putrid disorders hence have their origin. It is recorded of Methusalem, who being the longest liver, may be

supposed to have best preserved his health, that he slept always in the open air, for, when he had lived 500 years, an angel said to him, 'Arise, Methusalem, and build thee an house, for thou shalt live yet 500 years longer.' But Methusalem answered and said, 'If I am to live but 500 years longer, it is not worth while to build me an house—I will sleep in the air as I have used to do.' Physicians after having for ages contended that the sick should not be indulged with fresh air, have at length discovered, that it may do them good. They may, in time, discover likewise, that it is not hurtful to those who are in health.''

When confined air becomes saturated with perspirable matter, the rest of that matter remains in our bodies, and so occasions disease, but it gives some previous notice of its future harm by producing certain uneasiness, slight indeed at first, such as a trifling sensation with regard to the lungs and a kind of restlessness to the pores of the skin. This restlessness is difficult to describe, and few that feel it know the cause of it. But we may recollect, that sometimes on waking in the night, we have found it

difficult, if warmly covered, to get to sleep again. We turn frequently without finding repose in any position. This fidgetiness is occasioned wholly by an uneasiness in the skin, owing to the retention of the perspirable matter. What physicians call the perspirable matter, is that vapour which passes off from our bodies, from the lungs, and through the pores of the skin. The quantity of this is said to be five-eighths of what we eat and drink.

Each individual must be considered in reference to his habits and customs regarding preparation for sleep; whether it be for walking, bathing, reading, eating, drinking, smoking, abstraction, planning, poetising or praying. Some persons feel it essential to have some easily digested food or mildly stimulating drink before retiring, others are convinced that reading or being read to facilitates the coming of Nature's soft restorer. Others find it essential to smoke. Then, of course, there are faddists; those who must walk about unclad in the cool air, those who must have certain kind of bed clothing, those who must breathe in a particular way, etc., etc.

Baits to Catch Sleep.—Many poor sleepers outwit the demon that is persecuting them by resorting to some method of dulling the senses either by gazing steadily at some object until their eyelids feel heavy when they hope to bridge the strait between momentary fatigue and genuine sleep at one leap, or by listening to some monotonous sound or calling up some particularly sedative scene or tiresome experience.

That sleep often results from monotonous repetition of one kind of stimulation, noise, sound or light everyone knows. The efficacy of the rhythmical rocking of the cradle, the monotonous chant of the lullaby, the sound of running water, and the dull voice of the monotonous lecturer, all testify to this. In fact many insomniacs successfully utilise it to produce sleep. Wordsworth would sleep by calling up in his mind's eye:

A flock of sheep which leisurely pass by
One after one; the sound of rain, and bees
Murmuring; the fall of rivers, wind and seas,
Smooth fields, white sheets of water and pure
sky,

but to do this successfully one has to have what may be called the meditative faculty.

One of the most amusing contributions to the literature of efforts of this kind is furnished by Southey who describing one of his sleepless nights said, " I listened to the river and to the ticking of my watch; I thought of all sleepy sounds and of all soporific things—the flow of water, the humming of bees, the motion of a boat, the waving of a field of corn, the nodding of a mandarin's head on the chimney piece, a horse in a mill, the opera, Mr. Humdrum's conversation, Mr. Proser's poems, Mr. Laxative's speeches, Mr. Lengthy's sermons. I tried the device of my own childhood and fancied that the bed rushed with me round and round. At length Morpheus reminded me of the Torpedo's Divinity lectures, where the voice, the manner, the matter, even the very atmosphere and the streaming candle-light were all alike soporific; when he who, by strong effort, lifted up his head and forced open the reluctant eyes never failed to see all around him asleep. Lettuces, cowslip wine, poppy syrup, mandragora, hop pillows, spiders' web pills, and the whole tribe of nar-

cotics up to bhang and the black draught would have failed; but this was irresistible, and thus twenty years after date I found benefit from having attended the course." Long distance suggestion most of us would call this, but still a brilliant and convincing testimonial to the power of monotonous stimulation.

The place to sleep is in a comfortable bed in the open air if possible. Circumstances are such that for the vast majority it is impossible to sleep out of doors. To sleep in a draught is the next best place. There are few things that contribute to sleep as does fresh, pure air. It has taken us a long time to realise this and sleeping in rooms that are practically unventilated is still unquestionably the habit with the majority of people. "The damp night air" is the bogey man for countless grown-ups still. Not only do the lungs and blood need air at night but so does the skin. Yet notice the precaution that we take with blanket and wadded covering to make sure that it does not get in. The child, the savage and the primitive man kick them off. Nature has her way. But once convention gets them in her grasp, then they

stay "tucked in." In this country we have been delivered from the bondage of the feather tick but we are still struggling with heavy, nearly air-impervious blankets.

CHAPTER IX

TREATMENT

Training the Mind.—Since the chief source from which insomnia flows has to do with a troubled mind, it follows that the most effective remedy is the restoration of tranquillity and the bringing of the mind under control. Where there is fear of sleeplessness this fear must be banished. If the insomniac is in a state of mental irritability and exaltation he must force from his mind the thoughts that occasion such irritability and exaltation, just as he would force from his hearing the conversation of those all about him while he is being spoken to over the telephone. The training of the mind in this sort of concentration will help wonderfully in his battle against insomnia. To be able to read while the piano is being played in the next room requires the same mental effort necessary in forcing sleep-dispelling thoughts from the mind. If the noise of the piano may be shut out, the

will to be awake may be overcome. The hand may guide the pencil over the paper in markings of innumerable down strokes without the brain associating itself with the act, or else each figure "1" traced by the pencil may be followed intently in the mind.

If instead of allowing fear of approaching business disaster to fill his thoughts the insomniac will busy his brain observing and noting his breathing and bring all his mental attention to the task of aspiration and exhalation in slow measured tempo, he will soon find himself sleeping peacefully. Just as sleep may not be had while the teeth are clenched, the fists doubled up and the muscles and nerves strained and contracted, it may not be obtained while the thoughts are jumping from one subject to another as birds jump from branch to branch of a tree, chirping and twittering, but apparently accomplishing nothing. The mind may be as intently occupied in regulating the breathing, in relaxing the muscles of the body and untightening the nervous system as in speculating over the probable fluctuations of the stock market on

the morrow or the likelihood of one's position being suddenly lost.

Physical Aids.—Many "systems" of breathing have been urged by physicians of this and other generations as methods of facilitating sleep. In the early part of the nineteenth century one Gardner, who styled himself an "hypnologist," urged sufferers from insomnia, after taking a comfortable position with the pillow occupying exactly a right angle line drawn from the head to the shoulders, to take a full inspiration through the nostrils with lips closed. Having taken this full inspiration, the lungs are then left to their own action—that is, the respiration is neither to be accelerated nor retarded. During this operation, the patient must fix his attention wholly and completely upon his breathing. He must fancy to himself that he sees the breath passing from his nostrils in a continuous thread. The instant he brings his mind to conceive this to the exclusion of all other ideas, consciousness and memory depart, imagination slumbers, thought ceases, the sentient faculties lose their suscep-

tibility, the vital or ganglionic system assumes sovereignty and the individual sleeps.

A somewhat similar method was recently published by Dr. J. B. Learned. The principle is to induce muscular fatigue by exercises carried on in bed. He describes the method as follows: Lying on his back, the patient first reaches for the foot and head board at the same time, he then raises his head half an inch; at the same time he breathes slowly and deeply about eight inspirations to the minute, which are counted. After about twenty inspirations, the head which begins to feel heavy, is dropped. The right foot is then raised, the reaching for the boards and counting being continued, and similarly dropped when fatigued. The left foot goes through the same process. The muscles which are used in reaching for the head and foot boards are then relieved, and the body is elevated so that it rests on the head and the heels. He then turns on the right side and reaches for the head and foot as before. The same process is gone through on the other side. Thus eight positions have been assumed and a large number of muscles used. If sleep has

not been induced the same cycle is gone over again.

The method is a strenuous one but I have seen it act in able-bodied hypochondriacs in the most gratifying way.

A well-known educator and moralist, the president of a New England college, advocates the following:

"Assume an easy position, with the hands resting over the abdomen. Take a long, slow, but easy natural breath in such a way as gradually and gently to lift the hands outward by the action of the abdomen. At the same time gradually and slowly open the eyes, so that at the end of the inspiration they are wide open and directed upward. Let the breath out easily and naturally, letting the hands fall inward as the outward pressure of the abdomen is withdrawn. At the same time let the eyes drop and the eyelids naturally fall by their own weight, so that they are closed at the end of the expiration. Do all this quietly and naturally. Do not make hard work of it.

"Repeat the inspiration and expiration with opening and lifting, dropping and closing of the

eyes ten times. Then take ten breaths in the same way, allowing the eyes to remain closed. Alternate ten breaths with closed eyes.

"When the eyelids begin to feel heavy, and you feel tired and sleepy, as you will very soon, go through the motions more and more easily and lazily, until you merely will the motions without making any effort, or hardly any effort, to execute them. At this stage, or, more likely, in one of the intervals of breathing without any motion of the eyes, you will fall asleep.

"This rule gives the mind two gangs of workmen, two sets of muscles to watch and keep working in harmony. It cannot do this and take account of the work done and at the same time keep up much of a thinking about anything else.

"It induces the respiration that is characteristic of normal sleep. It tires the set of muscles the tiring of which is one of the favourite devices for producing hypnosis. It produces and calls attention to certain sensations in the eyelids which are the normal precursors of sleep. It alternates work in such a way as to

make resumption of work more and more unwelcome and rest more and more grateful."

Exercise. This leads to the consideration of exercise as an adjunct in the treatment of insomnia. Probably nothing that the insomniac can do will bring such gratifying returns as appropriate exercise. The best sort of exercise will be the kind that he likes to take and that will fatigue. For the hunter, it is tramping with a gun on his shoulder and a dog at his heels; for the golfer it is going about the links with a good-natured, honest opponent whom he can beat on the seventeenth green; for the sportsman it is following the hounds on a mount which is the envy of every man in the county who knows anything about horse flesh; and so on throughout the list. Most insomniacs, however, must content themselves with walking and bicycling, and such simple gymnastics as medicine ball and tennis, while for others boxing, fencing, swimming, rowing, tennis, squash, and riding may be possible. When the insomniac has no disorder that precludes walking, this is the exercise that may be recommended to him

with assurance that if he will devote enough time to it, sleep will be sure to come to him.

Food and Drink Before Retiring.—Benjamin Franklin, writing on the Art of Procuring Pleasant Dreams, has this to say:

"Exercise should *precede* meals, not *immediately follow them;* the first promotes, the latter, unless moderate, obstructs digestion. If, after exercise, we feed sparingly, the digestion will be easy and good, the body lightsome, the temper cheerful, and all the animal functions performed agreeably. Sleep, when it follows, will be natural and undisturbed. While indolence, with full feeding, occasion nightmares, and horrors inexpressible; we fall from precipices, are assaulted by wild beasts, murderers and demons; and we experience every variety of distress. Observe, however, that the quantities of food and exercise are relative things; those who move much, may and indeed ought to, eat more; those who use little exercise, should eat little. In general, mankind, since the improvement of cookery, eats about twice as much as nature requires. Suppers are not bad, if we have not dined; but restless nights

naturally follow hearty suppers, after full dinners. Indeed, as there is a difference in constitutions, some rest well after these meals; it costs them only a frightful dream, and an apoplexy, after which they sleep until Doomsday. Nothing is more common in the newspapers than instances of people, who, after eating a hearty supper, are found dead abed in the morning.

"Not a few find it advantageous to expose the unclad body to the cool air, to make cold ablutions, to take warm foot baths or to hold the feet for a few seconds under running cold water. All of these may at times be indulged in advantageously, especially if the insomnia is due to mental causes or upon habit."

Other Devices.—Another recommendation of Benjamin Franklin that has fallen into disrepute which it does not deserve, I quote here:

"A shock of cold water has always appeared to me, generally speaking, as too violent, and I have found it much more agreeable to my constitution to bathe in another element. I mean cold air. With this view, I rise almost every morning and sit in my chamber without

any clothes whatever, half an hour or an hour, according to the season, either reading or writing. The practice is not in the least painful, but on the contrary agreeable; and if I return to bed afterwards, before I dress myself, as sometimes happens, I make a supplement of my night's rest of one or two hours of the most pleasing sleep that can be imagined. I find no ill consequences whatever resulting from it, and that at least it does not injure my health, if it does not in fact contribute much to its preservation. I shall therefore call it for the future a brainy or tonic bath."

And in another connection he writes:

"When you are waked by any uneasiness, and find you cannot easily sleep again, get out of bed, beat up and turn your pillow, shake the bedclothes well, with at least twenty shakes, then throw the bed open, and leave it to cool; in the meanwhile, continuing undrest, walk about your chamber, till your skin has had time to discharge its load, which it will do sooner, as the air may be drier and colder. When you begin to feel the cold air unpleasant, then return to your bed; you will soon fall asleep, and your

sleep will be sweet and pleasant. All the scenes presented to your fancy, will be of the pleasing kind—I am often as agreeably entertained by them as by the scenery of an opera. If you happen to be too indolent to get out of bed, you may, instead of it, lift up the bedclothes with one arm and leg, so as to draw in a good deal of fresh air, and, by letting them fall, force it out again. This repeated twenty times, will so well clear them of the perspirable matter they have imbibed, as to permit your sleeping well for sometime afterwards. But this latter method is not equal to the former.

"Those who do not love trouble and can afford to have two beds, will find great luxury, in rising when they wake in a hot bed, and going into the cool one. Such shifting of beds would also be of great service to persons ill of a fever, as it refreshes, and frequently procures sleep. A very large bed, that will admit a removal, so distant from the first situation as to be cool and sweet, may, in a degree, answer the same end."

CHAPTER X

PRINCIPAL CURATIVE AGENCIES

Baths.—Of the known physical measures in the treatment of insomnia the external application of water is among the most efficacious. A prolonged warm bath (98 to 102 degrees Fahrenheit, lasting from ten to twenty-five minutes) with the addition of some volatile substance that irritates the skin and causes a gentle, pleasant stimulation of the blood circulation on the surface of the body, such as pine needle extract, is frequently most serviceable in overcoming insomnia due to fatigue, exhaustion, worry and disagreeable sensations, not amounting to real pain, coming from different parts of the body.

Insomnia associated with pain of what is commonly called a rheumatic nature, that is, pain due to inadequate elimination from the system of products of combustion, and insomnia accompanied by motor unrest commonly called

"fidgets" is frequently relieved by a bath at the temperature of from 102 to 108 degrees F., and of ten minutes' duration. Upon emerging from this bath, the individual should wrap himself in a warm flannel blanket until all the moisture is absorbed, when he is ready to don his night clothes and sink peacefully into sleep.

When there is no constitutional weakness and the system is able to withstand the shock of cold water, the treatment known as the dripping sheet has proven of great benefit. The patient stands in a foot tub of hot water with a towel dripping with ice water wrapped about his head. A linen sheet is then taken unwrung from a basin of ordinary cold water (60 degrees) and thrown over the back of the patient while a few rapid movements of the hand bring it in contact with every part of the body. Brief friction is made through the sheet after which it is removed, the body dried quickly and the patient put to bed. Often sleep follows within a few minutes.

Another method tried with success is the abdominal compress. The method here is to apply a compress of four or more layers of

flannel, large enough to cover the entire abdomen, taken dripping from cold water of from 50 to 60 degrees. This is covered with enough flannel to keep the clothing from getting wet and is allowed to remain in position an hour or more and even through the entire night should the patient be found to be asleep and the removal of the compress render likely his awakening.

So-called tonic baths have also been found of great remedial value. As given in hydriatic establishments they consist in the vigorous application of water, alternately hot and cold, from the nozzles of water hose under adjustable pressure and through perforated pipes arranged as a circular cage and known as needle and shower baths.

Taken during the day, the tonic bath invigorates the patient, invites him to beneficial effort such as exercise, favours the sensation of relaxation and improves the circulation and nutrition. Taken at the bedtime hour, it has a sedative effect. At first, extremes of temperature should be avoided, as otherwise the end which is desired may be defeated and the pa-

tient become more excited than before. A moderately low temperature of from 65 to 70 degrees, reduced two or three degrees at every application, I have found to be more practical than an extremely low temperature from the first. It has been my experience that patients respond better if they become accustomed to the use of cold water than if a cold blanket, so to speak, is thrown over them from the first. Many patients thus treated never recover their confidence sufficiently thereafter to make ready response to the treatment and it is therefore wiser to make haste slowly and not try to cure by one application.

Where the patient may not avail himself of the commodities of a hydriatic establishment, the following substitute may be resorted to. The patient sits or reclines for five minutes in a tub half or one-third full of water at a temperature of from 75 to 85 degrees, while the skin is vigorously frictioned by an attendant or nurse.

Packs—Warm and Cold.—Very good results, particularly in individuals of a high-strung and nervous temperament have been obtained from the use of cold packs and warm packs. The

drawback to them is that they may only be applied by trained nurses or individuals having had some experience. A cold pack at bedtime relaxes the nerves and invites repose. The sensation of tension nearly always present is relieved and sleep readily induced, particularly if a gentle massage follows.

The night wet pack is administered as follows: First spread upon the cot or bed three large sized woollen blankets with the top ends placed half way over the pillow in order that they may be drawn smoothly about the neck and shoulders, then spread over the blanket a linen sheet or a large sized table cloth wrung out of water at 75 degrees (reduced two degrees each succeeding application). The sheet must be wrung as dry as possible, as any superfluous moisture retards reaction. After spreading the sheet upon the blankets which have already been prepared the patient is instructed to lie down and one end of the sheet is brought around the body (the arm meanwhile having been raised), then over one leg in order that no part of the body touches another. Then lower the arms and wrap the other edge of the

sheet over the arms and between the legs. If the feet are cold it may be wiser not to wrap them in wet sheets. The blankets are then wrapped about the patient as securely as possible in order to exclude the air. The patient having been placed in the middle of the blanket, there must be an even margin on either side which must be wrapped alternately beginning at the neck where it must be wrapped closely and firmly though it must not bind across the back of the neck or throat either of which will produce a headache. After the first layer of blanket is put about the patient a hot water bottle can be placed against the feet, care being taken that it is not too hot or too near the wet sheet. The remaining layers of the blanket are then arranged alternately, and lastly a cold compress is placed on the head and changed occasionally.

A glass of water may be given twice during the hour that the patient is in the pack. Before it is time to remove the patient from the pack, the half bath should be prepared. Draw water of the required temperature (90 to 95°F.) about a foot in the bath tub, then have

a foot tub or other receptacle filled with water 10 degrees lower with a dipper at hand to use for the effusions.

In removing the patient from the pack he should not be entirely exposed, but leave one blanket to protect from chilliness on the way to the bath. Immediately upon entering the tub the patient should be rubbed vigorously over the entire body and the exposed portion, which will be from the waist up, must not only be rubbed but slapped, not with a heavy blow, but a light, tingling slap, followed by water dashed upon the shoulders and chest. Have at hand a linen sheet and wrap it around the patient when taken from the tub and rub quickly (not with the sheet) until dry, using friction and slapping. This procedure is frequently enhanced by massage after the patient has been put to bed, and by giving some hot drink.

Massage.—Insomniacs whose sleep disturbance can be traced to mental causes find great relief in massage. The best results are obtained by subjecting the patient to gentle massage and inducing physical reaction and mental appeasement by light surface contact. Where

there are no bodily infirmities and where it is necessary to occasion a certain degree of lassitude, the treatment may be more vigorous and partake of the rough fundamental muscle kneading given to athletes.

Massage for insomnia must vary with the patient. A high-strung, nervous patient should be treated in the morning or early in the day—otherwise he or she will get wide-awake and excited. Others will be soothed and fall into a quiet sleep after an evening treatment. The operator is instructed not to talk to the patient, especially after the back has been attacked and to finish the treatment with long, gentle strokes on the head and down the arms. The patient will then be turned on the side and covered properly and the windows opened wide.

In many instances, massage of the feet is of great service. I have also observed that in cases of sleeplessness springing from the continued occurrence of the same train of thought, the insomnia will yield to light massage of the head. Many nervous individuals go to sleep easily while their hair is being smoothed, a survival of a custom long practised in the nursery.

Bed-time Suppers.—Whether or not insomniacs should take food upon retiring is a question which physicians are frequently called upon to answer. All that can be said is that it depends upon the individual and upon his habits and customs.

It is a fact that the average human being feels a physical drowsiness after taking food. This phenomenon occurs not only in human beings, but in all animals. It is very manifest in the lower animals, all of whom display the greatest disinclination to be active after feeding. In a general way, it may be said that it is prejudicial to health to consume such a quantity of food as will cause a sensation of leaden drowsiness after it is taken.

The relationship which exists between insomnia and indigestion is only once removed from that which exists between normal digestion and drowsiness.

A bedtime supper is likely to be injurious to a person who has taken a full meal only three hours earlier. On the other hand, those who are accustomed to taking only a light supper and that early in the evening find their sleeping

greatly benefited by taking a glass of sour milk and a biscuit, a cup of hot malted milk (providing they have no tendency to sour stomach) or a cup of hot broth on retiring. This comes from the fact that many who suffer from insomnia have disordered nutrition and lowered vitality. To counteract this, it becomes advisable to get easily digested food into them frequently. We therefore have to avail ourselves of the bed hour to administer it and if we find, as is sometimes the case, that such administration facilitates going to sleep, it is gratifying. Particularly is this overfeeding effective where intestinal indigestion and disorder of the blood-vessels exists. In these cases it has been found that the digestion of a large amount of food is conducive to sleep. It is currently stated that such somnolence is due to cerebral starvation of the brain caused by the demands of the stomach upon the available energy, but it is more legitimate to attribute it to a form of self-intoxication.

The maxim that "We all eat too much," while it contains some truth, is not nearly so all-embracing as the statement that what is too much

food for one person is not enough for another. One of the healthiest men I have ever known who died at eighty-three from natural causes ate every day of his life quite enough food to sustain a small family. I never heard him ask, "Is it good for me?" and he ate what he liked and as much of it as he craved. Were his neighbour to do the same, he would soon fall a victim to gout or become subject to depression and inertia. Overeating has relation to insomnia only in that it causes indigestion and disease of the arteries.

Electric Treatment.—Electricity which at one time or another has been hailed as curative of practically every disease has been tried with varying success for the treatment of insomnia. Aside from the fact that the high frequency current generated from a static machine is not accessible from one's bedroom, its value as a calmant is doubtful. Occasionally the high frequency current has been known to bring on drowsiness but the evidence is just as conclusive that it excites quite as frequently as it soothes.

CHAPTER XI

OPIATES AND NARCOTICS

Drugs not a Cure.—Insomnia cannot be cured by drugs. It can be cured only through the detection and eradication of its causes, by the utilisation of measures to develop strength, tone and vitality, and by the adoption and maintenance of a sane point of view which means in a great many instances strengthening the will power.

To compel sleep by opiates or sedatives is not to cure sleeplessness. It is idle to attempt to cure insomnia by the taking of drugs whose most striking effect is to produce it. Not only is it bound to fail, but nearly always it leads to the formation of a habit, the continuance of which is subversive of happiness and health and leads the patient into a slough of unhappiness and despondency.

When the brain has been overtaxed by engrossing work or when the nervous system has

been shattered by severe shock, exhausted by terrible anxiety or worn by excitement or vigils, a judiciously selected sedative may bring repose to the body and refreshment to the brain and so break the wakeful habit and restore the sufferer's confidence. But this is not a cure of insomnia nor is it a license to take narcotics whenever one is wakeful. The physician who is most earnest in his efforts to overcome insomnia in others is the last person to minimise their value. But no word of warning can be too loud and no protest too emphatic against the general use of narcotics. All such drugs are injurious and health destroying and their repeated continuance and administration is both unscientific and dangerous.

In view of the fact that the truth of this statement is universally admitted, it is difficult to understand how some supposedly intelligent persons are willing to jeopardise their health and happiness by taking drugs on the slightest provocation. The administration of narcotics leaves the cause of the sleeplessness untouched. The system becomes accustomed to the drug and larger and larger doses are required to

produce the desired effect. Even when this effect is produced, it is at the expense of impaired digestion, disordered circulation and deterioration of the blood. On the *morale* of drug-takers the effect is even more disastrous. The victim of insomnia who has had his suffering momentarily assuaged by some sleeping powder, is no longer willing thereafter to bear with equanimity or to tolerate with patience a privation of sleep which previously he bore philosophically. Why lie awake till dawn when the peace of oblivion may be had through the absorption of an allegedly harmless powder made agreeable to taste by the apothecary? Chiefly because each succeeding powder or potion diminishes the resistance and impairs the manhood of the individual who takes it. We constantly hear it said that modern narcotics such as sulphonal, trional, medinal and veronal are harmless or practically harmless as compared with chloral, opium and their derivatives. This is not true. They are less harmful insofar as they induce habit less quickly, but the habit once formed is quite as pernicious and often more difficult to break. The most obsti-

nate example of drug addiction coming under my observation was one of sulphonal habit. The patient, a young woman of high social position, has so far remained unmoved by the solicitations of her family, the appeals of her fiancé and the commands of her physician. She displays a combination of indecision and obstinacy which is not uncommon in narcotic habitués. This, combined with impairment of the moral sense which shows itself chiefly in bearing false witness and making statements at variance with facts, puts her beyond a physician's reach until after she shall have been adjudged an incompetent. Indecision, impairment of memory, blunted moral sensibility in some form and bodily inertia are the customary results of sleep-medicine addiction. Many who point the finger of scorn at the drunkard, wrestling with an imperious and ofttimes inherited appetite, extend sympathy amounting to approbation to those who stultify their manhood by reaching out for the ever-ready tablet or powder that will give them temporary oblivion.

Drugs Other Than Opiates.—The drugs that are of most general use in the treatment of

insomnia are chloral and its compounds, bromide, paraldehyde, sulphonal, veronal, trional, medinal, opium and its derivatives. Of these the first and last are the most dangerous.

The sleep that results from narcotics varies in depth and in capacity for refreshment, that is, in its after effects. The drug-induced sleep that most closely approximates the normal is that produced by chloral, or, as it is technically called, chloral hydrate. Next to opium and its derivatives it is the most dangerous of all narcotics. First, because it seriously disorders the heart and, second, because the formation of the chloral habit is very easy. The appetite for chloral demands to be sated as imperiously as the appetite for opium and cocaine. Even in the hands of a physician, the greatest care and discernment are needed and no one thinks of prescribing it without first ascertaining the condition of the heart. When no weakness of that organ exists, it may be taken in ten-grain doses when sleep is absolutely essential. Chloral, combined with other bodies, and derivatives of chloral such as chloralmide, chloralos, etc., have had a wide vogue. Chloralmide is less depress-

ing to the heart and the circulation than chloral, but chloralos is more poisonous than chloral, though it depresses the circulation less.

Examination of the prescription book of any pharmacy will reveal the fact that the salts of bromide, bromide of soda and bromide of potassium are more widely used than any drug in the pharmacopeia. The bromides are sedatives of motion and sensation. They lessen irritability, whether it be of mind or body, and tend to soothe and assuage pain. The penalty that one pays for their use is very great. Taken for any considerable length of time, they destroy initiative, impair vitality, disturb the vegetative functions of the body and produce physical and mental inertia.

The products of the chemical laboratory, popularly spoken of as coal tar distillations of which the drugs cited ending in "al" are types, enjoy a fictitious reputation for being practically harmless. These sleeping tablets are so innocuous looking and their effect is so pleasant and efficient that it is difficult to convince the sufferer from insomnia that danger lurks in their habitual use. But every physician who

has had experience in the treatment of so-called nervous diseases can testify that cases of chronic poisoning from one or all of these drugs is frequent and that disturbances of nutrition and serious ill-health often result from their indiscriminate use. I am sure that if it were generally known that such drugs as veronal, trional, medinal and sulphonal had the capacity to cause serious ill-health, which I know from experience they have, those who are tempted to take them just because they fear an hour or two of discomfort while awaiting sleep would think twice before doing so.

The ideal narcotic is one that produces sleep of sufficient duration to refresh under all conditions and without ill effects or disagreeable after effects. It need scarcely be said that there is none. Some narcotics are less harmful than others and among these is paraldehyde. Were it not for its disgusting taste and vile, persistent odour it might have more usefulness than it has. I have never seen paraldehyde taking degenerate into a habit. The aroma of it is such that no one can take it without advertising the fact. In states of apprehension, men-

tal perturbation, anxiety and depression a teaspoonful or two taken in sugar water is sufficient to produce sleep. There is no narcotic that I recommend to patients with more satisfaction than this, for I am reasonably sure that they will not take it except as a last resort.

Opiates, etc.—By far the most important of the narcotics is opium. Sleeplessness is founded so frequently in pain and discomfort that all that is required is cessation of them and sleep will follow. In the true sense of the term opium is not a narcotic at all. On the contrary, it often produces wakefulness, but by virtue of its unique capacity to assuage pain it is more widely used in combating sleeplessness than all the narcotics combined. For upward of two thousand years surcease of pain has been brought about by opium and its derivatives. Its usefulness to the human race is immeasurable. It is regrettable that one cannot say this without pointing out and emphasising the great danger of its slightest abuse. Probably no one is so ignorant of the capacities of opium as not to realise this. But only the physician and those who are so unfortunate as to have fallen into

the bondage of opium can realise how terrible such servitude may be. It is unfortunate for mankind that De Quincey and Coleridge took opium but more unfortunate that they told about it, or let it become known. Not a few even in my own experience have found it easy to convince themselves that their mental faculties would be stimulated and their endurance enhanced by such indulgence. In the same way I have known the cocaine habit to develop in ambitious youths while Dr. Doyle was still administering the drug to Mr. Holmes to whet his sensibilities and to stimulate his capacity to draw logical conclusions. It is doubtful if the working capacity of the human machinery can be enhanced in any way temporarily by narcotic or stimulant, and for each loan that it accepts, or has thrust upon it, usurious interest has to be paid. This interest is invariably taken from the bank of health.

There are many drugs that contribute to sleep by relieving pain, discomfort and distress. Such are phenacetin, acetanilid, aspirin, valerian, etc. Five to ten grains of phenacetin, or ten to fifteen grains of aspirin will frequently

transform a night made hideous by headache and insomnia into one of comparative comfort.

From earliest times alcohol has been used to facilitate sleep. That it produces drowsiness in some, wakefulness in others is well known. It is at best but a temporary care-killer and save when taken in small quantities, highly injurious to the human race. Those who have observed the effect of its use and abuse are unanimous in the belief that the health and morals of all nations would improve if it were banished from the world. Its use to combat insomnia is fraught with danger.

Where insomnia is casual there are simple sedatives which will relieve. It is not an admission of cowardice to take one of them, no more than putting an extra log on a fire is an admission on the part of the one who wants to be warm and comfortable, that he is a weakling. Nor is such indulgence injurious to the health or well-being. On the contrary, it may be and often is beneficial. It is when the physiological function of sleep is fundamentally disturbed and the attempt is made to restore it by drugs that the mischief begins.

When the time comes when disease is no longer treated by drugs, save such drugs as have specific action: quinine in malaria, iron in anemia, arsenic in psoriasis, the millennium will be at hand. Drugs and chronic disease should be divorced forever. The use of drugs should be confined to the relief of conditions that are for the time intolerable, such as alkali to relieve the discomfort of a sour stomach, a laxative to stimulate the expulsive power of the large intestines, an analgesic to relieve pain. If there is a diseased state underlying these conditions it is to be combated by the administration of a specific or by the utilisation of such measures as contribute to the restoration of diseased tissues,—rest, exercise, occupation, recreation, fresh air, sunlight, food, water, heat, electricity, massage, suggestion, discipline and surgical aid.

CHAPTER XII

HYPNOTISM AND SUGGESTION

Hypnotism.—Despite the interpretation of the phenomena of hypnotism in accordance with the principles upon which the science of psychology is founded there is still a widely held belief that hypnotism is induced by the action of a mysterious force or fluid which emanates from the operator. This would make of the hypnotiser a superman to be feared or revered, trusted or avoided, in proportion as confidence was felt in his morality or integrity. All this is nonsensical. No other force or fluid flows from the operator while hypnotising a subject than flows from a child modelling a snow man.

The simple procedure in inducing hypnotism is first, to obtain obedience from and engender faith in the person to be hypnotised. The subject being in a submissive attitude, without antagonism of will, is then asked to look steadily at an object. The operator will then say to

him over and over, "Go to sleep," assuring him the while that he will inevitably do so. No mysterious, occult or superhuman power save that to inspire confidence is needed. Hypnotism is ordinarily induced by monotonous stimulation of one of the senses, such as fixed gazing, and passes with contact or through central stimulation by means of suggested ideas or by both together.

There is no doubt whatever as to the effectiveness of hypnotism in inducing sleep. The fact, however, that it involves on the part of the person hypnotised a complete surrender of the will power and that each successive abdication of effort will render the subject less able to exert his will, argues seriously against the use of hypnotism save as a last resort. The insomniac who relies upon the hypnotist for his sleep may find himself so dependent upon this unnatural and artificial subterfuge, as to be utterly unable to acquire sleep in any other manner. Hypnotism is all the more to be deprecated for the reason that direct or indirect suggestion during the waking state will prove fully as efficacious as suggestion made

during the hypnotic state. If the insomniac prove himself not amenable to simple suggestion, then and then only should he avail himself of the aid of hypnotism. The advantage of hypnotism lies in the great susceptibility to suggestion of the individual hypnotised. The subject responds at once, even when the suggestion is made in the very lightest and shallowest stages of hypnosis. Indeed, in the treatment of insomnia by hypnosis the most successful practitioners only induce the lightest stages. Properly used, hypnotism may be of real service to the insomniac in aiding him to a restoration of a normal function, disturbed through apprehension or other emotional causes. But its use to overcome insomnia or any other disorder should be restricted narrowly to the physician and psychologist. The individual who seeks to avail himself of it for the relief of his suffering ought to feel absolute assurance that the person who utilises it knows what he is doing and what he aims to accomplish.

Suggestion.—Much mystery surrounding the response of the body to mental stimuli has

been dispelled. Although we are far from being able to give a satisfactory explanation of the way in which the brain exerts its influence upon the remainder of the nervous system and upon the entire body, yet these effects having been definitely ascertained, the physician can avail himself of the cause with the confident expectation that the result which he desires will be attained.

The readiness of bodily action to follow upon mental conditions varies greatly in different subjects. Some measure of response to mental incitement is manifest in all and in many the reaction may be heightened by the appropriate conjunction of circumstances. The mental incitement may be accidental without personal volition and initiation of it may emanate from things within or without the individual. Or it may be deliberate and carefully planned and emanate from the volition of another.

The physician who employs mental suggestion in his treatment of insomnia must take into consideration the patient's temperament, his manner of life, culture, social scale, personal and family history, specific beliefs, likes

and dislikes, prejudices, aversions and many other features of his make-up. If the patient is religious, helpful suggestions may find ready lodgment in his mind while in meditation or in the midst of his devotions. If he is superstitious, suggestion arising from the possession of a charm will prove effective. If he is credulous, some plausible explanation, weighted with a large measure of the obvious will induce a sane condition. It is the belief of the patient that does the work.

Suggestion may be direct or indirect. Direct suggestion, verbal or personal, may be effectual of itself, but most generally the suggestion that is most potent is indirect and extra personal and proceeds from the environment. Thus music or devotion to any art, physical exercise, mental work, preoccupation in a favourable love affair or contemplation of some sublime ideal may bring about a remedial state of consciousness, whether the disorder be insomnia, introspection, or organic disease. An apparently unstudied remark to the nurse or a member of the family that the patient will soon be fast asleep often works better than the direct sug-

gestion that he will not hear the clock strike ten because he will be asleep. This does not mean that direct suggestion, particularly when made after the patient's mind has been prepared by explanation, expostulation or exhortation is not of value. It is, on the contrary, of great use and efficacy and in few conditions or states of mind is it more effective than in overcoming insomnia. The poor sleeper is so convinced that he will continue to "thread a dim and perilous way through words and things" that he falls into a state of fear and apprehension in which he dreads the advent of the night. He asks himself the purpose of his going to bed as he knows he will not sleep. He envies those who are sleeping and is convinced, even though he does not admit it aloud, that he will not sleep. I have had such patients tell me, "I was tired enough to sleep and I felt sleepy, but I could not get it out of my mind that I would not be able to go to sleep." It is in such instances that direct suggestion works most beneficently. It calms the fear, counteracts the apprehension, uproots the conviction of inadequacy and fosters the will to sleep. It restores confidence

and impregnates the individual with self-reliance. Often a sleeping draught on the night table will act quite as efficiently as if the insomniac took it. This is a most potent form of suggestion. The patient feels that there is something at hand that can rob the night of its terrors. His fears are calmed and he goes to sleep.

Drugs or substances that are inert and that have no soporific virtue act in a similar way. The insomniac believes that he is taking something that will make him sleep and so the miracle is accomplished with a few grains of bicarbonate of soda or a capsule of methylene blue. This is an extremely successful expedient with patients. The drawback to it is that the patient on finding that he has been deceived may shut himself off from all further efforts to reach him by suggestive methods.

An efficacious method used by the Emmanuelites is to invite the insomniac to sit in a certain chair, assuring him at the same time that every one of the sufferers from sleeplessness who has sat in that particular chair has gone to sleep almost immediately.

Many of the non-medicinal measures found useful in the treatment of insomnia, such as massage, electricity, diet and regimen act partly by virtue of the suggestion that accompanies their employment. Of course, they do good of themselves but much of their potency is derived from suggestion.

CHAPTER XIII

READING AS A SOPORIFIC

The principal object of those suffering from insomnia being to purge the mind of the thoughts that are parading up and down through it, frequently with martial accompaniment, and to saturate it with gentle, peaceful, serene, impersonal thought that will depict the idyls of life without strife and passion, books are what most of them turn to in order to accomplish this end.

There are books and books. Obviously the seeker after sleep will not choose for an opiate a stirring tale of battle or adventure. Rather will he select a lulling work of ponderous philosophy or of monotonous description or soothing charm, which he may read without being impelled to understand, and without being intellectually or emotionally stimulated or excited. Choice will vary, too, with the age, sex,

education, and personal tastes of the individual.

There are books that put one to sleep by boring and tiring the reader. He sleeps from sheer fatigue and desperation. They excite no thought, they arouse no emotion, they conjure up no imagery. They are the apotheosis of the commonplace, the fountain-head of all ennui, the limbo of all joy. By their very nature they are ideal for the treatment of insomnia through the eyes. Each insomniac must find these for himself. He will not have to seek for them long. If this be too severe a discipline, he may come upon books that, while neither boring nor fatiguing, will yet lead to sleep. Such books prepare the mind for sleep as rain prepares the soil for vegetation. When an insomniac finds one, he should hold fast to it, for its efficacy is not impaired by use. I have known Sir Thomas Browne's *Religio Medici* to operate as well the hundreth time as the first, and the *Psalms* are an unfailing help in time of trouble.

There are those who have forced their way to oblivion by reading the sermons of Jonathan Edwards, but these discourses can hardly be

recommended with confidence. To most people they lead to distressing questionings, such as an attempt to discover the kindliness and justice of afflicting poor wretches with a scourge like hysteria, and then impelling their God-fearing neighbours to persecute and torture them. Let us suggest, rather, the gentle, delightful Amiel, for example; the humble, trusting, resigned St. Francis of Assisi; the placid, melancholy A. C. Benson; the revered Sir Thomas Browne. Each of these has written books that can be recommended to the casual and confirmed insomniac without fear of perverting their literary taste, or endangering the much-desired mental and emotional equanimity. As a sleep-producer, however, the palm should perhaps be awarded to the *Familiar Letters* (*Epistolae Ho-Eliance*) of James Howell. Few, I fancy, can read these epistles concerned with the Copernican Theory, Presbyterianism, or what not, without experiencing drowsiness.

I am sure that I have the gratitude of many a poor sleeper, too, for having recommended to him *A Poet at Grass,* which, I

have somewhere read, is autobiographical of George Gissing. The book breathes serenity and contentment, and depicts the charm of life in the country and the spiritual peace of one who had kept his soul meek and his disposition sweet despite the pangs of penury and the struggles of adversity.

For some insomniacs, Emerson's *Essays* and *Poems* have proved good night reading, and excellent as a mental tranquiliser. For this same reason, most of the ancient philosophers are excellent sleep-producers. Plato's dialogues have, in my experience, proved helpful; Carlyle's *Sartor Resartus* highly effective, and William James' *Value of Pragmatism* of almost instantaneous effect, though many will find them too provocative of thought or too apt to kindle to active antagonism. Charles Lamb and Oliver Wendell Holmes have paved the way to the house of Morpheus for many, and might well be sampled by sleep-questing night readers.

Heroic treatment may be self-administered by the reading of law books, government reports, the dictionary, or the telephone book, but here again, what is one man's meat is another

man's poison, and individual tastes and peculiarities must determine the choice. In a general way, the principle may be laid down that any book is helpful to the insomniac which occupies his mind sufficiently to displace vagrant, insistent, and harassing thoughts, and yet does not spur it into restless activity.

Of course, when the insomniac is wooing sleep through a book, he will have made all preparations for surrendering his physical self to sleep when it does come. It will avail him nothing if after attaining the period of drowsiness he arouse himself by physical activity coincident with disrobing. Before beginning his reading he will have stripped himself of clothing down to his night habiliments. Then, when he feels his senses dulled and his eyelids grown heavy, he will have but to put out the light and abandon himself to the peaceful and refreshing slumber, which, it is the author's hope, this little volume may have helped him to capture.

THE END